LISTING OF CLAIMS:

1. (Previously Presented) An ionic conduction material comprising a polymer matrix, at least one ionic species and at least one reinforcing agent, wherein:

- the polymer matrix is a solvating polymer optionally having a polar character, non-solvating polymer carrying acidic ionic groups selected from the group consisting of alkylsulfonic groups, arylsulfonic groups, perfluorosulfonic groups, and perfluoro-carboxylic groups, or a mixture of a solvating or non-solvating polymer and an aprotic polar liquid;
- the ionic species is either an ionic compound selected from salts and acids, said compound being in solution in the polymer matrix, or an anionic or cationic ionic group fixed by covalent bonding on the polymer, or a combination of the two;
- the reinforcing agent is a cellulosic material comprised of cellulose single crystals or of cellulose microfibrils

wherein a reinforcing agent network is formed in the material from the reinforcing agent being brought into contact with the polymer.

2. (Cancelled)

3. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the proportion of reinforcing agent is between 0.5% and 70% by weight.

4. (Previously Presented) The ionic conduction material as claimed in claim 3, wherein the proportion of reinforcing agent is between 1% and 10% by weight.

5. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the polymer matrix is comprised of a crosslinked or non-crosslinked solvating polymer.

6. (Previously Presented) The ionic conduction material as claimed in claim 5, wherein the solvating polymer carries grafted ionic groups.

7. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the polymer matrix is comprised of a non-solvating polymer carrying acidic ionic groups.

8. (Cancelled)

9. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the polymer matrix is comprised of a mixture of solvating or non-solvating polymer and at least one aprotic polar liquid.

10. (Previously Presented) The ionic conduction material as claimed in claim 9, wherein the aprotic polar liquid is selected from the group consisting of linear ethers and cyclic ethers, linear acetals and cyclic acetals, linear carbonates and cyclic carbonates, esters, nitriles, nitrated derivatives, amides, sulfones, sulfolanes, alkyl-sulfamides and partially halogenated hydrocarbons.

11. (Previously Presented) The ionic conduction material as claimed in claim 9, wherein the polymer is a non-solvating polymer selected from the group consisting of polymers which have polar groups and which comprise units containing at least one heteroatom selected from sulfur, nitrogen, oxygen, phosphorus, boron, chlorine and fluorine.

12. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the ionic compound is selected from the group consisting of strong acids and from salts of alkali metals, alkaline-earth metals, transition metals, rare earths, organic cations and organometallic cations of said acids.

13. (Previously Presented) The ionic conduction material as claimed in claim 12, wherein the ionic compound is selected from the group consisting of perchloric acid, phosphoric acid, perfluoro-sulfonic acids, trifluorosulfonylimide acid, tris(perfluorosulfonyl)methane acid, perfluoro-carboxylic acids, arylsulfonic acids, perfluoro-sulfonimides and arylsulfonimides, and from salts of said acids.

14. (Previously Presented) The ionic conduction material as claimed in claim 1, further containing an electronically conductive material and an insertion material.

15. (Previously Presented) The ionic conduction material as claimed in claim 14, wherein the electronically conductive material is selected from:

- carbon in the form of a fabric or powder,
- intrinsic electronically conductive polymers,
- mixtures of an intrinsic electronically conductive polymer and acetylene black, or
- polymers with hybrid conduction, either ionic or electronic, used on their own or with carbon.

16. (Previously Presented) The ionic conduction material as claimed in claim 14, wherein the insertion material is an oxide of a metal selected from cobalt, nickel, manganese, vanadium and titanium, or an iron phosphate or a graphitic compound.

17. (Previously Presented) An electrode for a battery, comprising a composite material, wherein the composite material is a material as claimed in claim 14.

18. (Previously Presented) The ionic conduction material as claimed in claim 1, further containing an electronically conductive material and an active material performing as a catalyst.

19. (Previously Presented) The ionic conduction material as claimed in claim 18, wherein the electronically conductive material is selected from:

- carbon in the form of a fabric or powder,
- intrinsic electronically conductive polymers,
- mixtures of an intrinsic electronically conductive polymer and acetylene black, or
- polymers with hybrid conduction, either ionic or electronic, used on their own or with carbon.

20. (Previously Presented) The ionic conduction material as claimed in claim 18, wherein the active material is platinum or a platinum alloy.

21. (Previously Presented) An electrode for a fuel cell, comprising a composite material, wherein the composite material is a material as claimed in claim 18.

22. (Previously Presented) An electrolyte for a lithium-polymer battery, in which the negative electrode is comprised of metallic lithium, and a material as claimed in claim 1.

23. (Previously Presented) The electrolyte for a lithium-polymer battery as claimed in claim 22, wherein the polymer matrix of the ionic conduction material is comprised of an amorphous one-dimensional copolymer or of an amorphous three-dimensional polyether network.

24. (Previously Presented) An electrolyte for a lithium-polymer battery, in which the negative electrode consists of lithiated graphite, and a material as claimed in claim 1.

25. (Previously Presented) The electrolyte for a lithium-polymer battery as claimed in claim 24, wherein the matrix of the ionic conduction polymer is comprised of a homo- or copolymer of vinylidene fluoride, acrylonitrile, methacrylonitrile, alkyl acrylate, alkyl methacrylate or ethylene oxide.

26. (Previously Presented) An electrolyte of a membrane fuel cell, comprised of an ionic conduction material as claimed in claim 1.

27. (Previously Presented) The fuel cell electrolyte as claimed in claim 26, wherein the polymer matrix is comprised of a non-solvating, polar or non-polar polymer carrying acidic ionic groups.

28. (Previously Presented) The fuel cell electrolyte as claimed in claim 26, wherein the polymer carries alkylsulfonic groups or arylsulfonic groups or perfluorosulfonic groups.

29. (Previously Presented) A solar cell comprising a photoanode and a cathode separated by electrolyte, the photoanode carrying a conductive glass, wherein the electrolyte is comprised of an ionic conduction material as claimed in claim 1.

30. (Previously Presented) A supercapacitor comprised of an electrochemical cell comprising two electrodes separated by an electrolyte, wherein the electrolyte is an ionic conduction material as claimed in claim 1 in which the ionic compound is a lithium or tetraalkylammonium salt, or an acid.

31. (Previously Presented) Electrochromic glazing comprising two electrodes separated by an electrolyte, wherein the electrolyte is an ionic conduction material as claimed in claim 1 in which the ionic compound is an acid.

32. (Previously Presented) An electrode for a battery, comprising a composite material, wherein the composite material is a material as claimed in claim 15.

33. (Previously Presented) An electrode for a battery, comprising a composite material, wherein the composite material is a material as claimed in claim 16.

34. (Previously Presented) An electrode for a fuel cell, comprising a composite material, wherein the composite material is a material as claimed in claim 19.

35. (Previously Presented) An electrode for a fuel cell, comprising a composite material, wherein the composite material is a material as claimed in claim 20.

36. (Previously Presented) The ionic conduction material as claimed in claim 1, wherein the reinforcing agent is brought into contact with the polymer in solution or in the form of a latex in suspension, or with precursors of the polymer.